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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hugh Barrass

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EXAMINER

CHANG, EDITH M

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/964,150		BARRASS ET AL.	
	Examiner		Art Unit	
	Edith M. Chang		2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action, Pre-appeal brief request for review, is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

2. Claims 5-7 and 12 are objected to because of the following informalities:

Claims 5-7, line 3: "with a CPE device" should be with the one or more CPE devices". Since the first predetermined PSD is used with the one or more CPE devices as recited in claim 1.

Claim 12, line 5: "the PSDs" should be "the one or more PSDs".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites that "a data switch coupled to one or more customer premises equipment (CPE) devices and operable to communicate with *the one* or more CPE using a first predetermined power spectral density (PSD) and communicate with *the one* or more CPE using a second predetermined power spectral density (PSD)" which is not described in the disclosure of drawing FIG.2, wherein

The data switch 12 communicate with *the one CPE 24a* with a predefined first predetermined PSD 34a/28a, a second predetermined PSD 34b/28b is used to communicate with the CPE 24b, but not *the one CPE 24a*.

Claims 2-14 are dependent on the rejected claim 1.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4, line 2: "the CPE device control packets" lacks antecedent basis.

Claim 22, line 9: "the CPE devices" lacks antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 4 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewin et al. (US 6,829,252 B1).

Regarding **claim 1**, Lewin et al. discloses a system for communicating data (FIG.1), comprising:

a data switch (DSLAM 20, DSL Access Multiplexer) coupled to one or more customer premises equipment (CPE) devices (12 CPE-Channel #1 to #24 to CPE via 18, column 5, lines 40-43);

the data switch comprising *software embodied in a computer readable medium* (FIG.6, column 13, lines 23-25, lines 46-49 & lines 60-65) and operable to:

communicate with *the one or more* CPE using a first predetermined power spectral density (PSD) (DATA 122 FIG.6 to VDAL DATA16 FIG.1 to CPE, downstream) and communicate with the one or more CPE using a second predetermined power spectral density (PSD)(18 FIG.1 to 102 FIG.6 from CPE, upstream, column 12, lines 60-67).

Regarding **claim 3**, in FIG.8, step 214, Lewin et al. discloses that the data switch of VDSL is operable to direct a CPE device to communicate with the data switch using a particular PSD (the VDSL).

Regarding **claim 4**, Lewin et al. discloses in FIG.8, step 214 that the data switch direct the CPE device by communication containing one or more parameters defining one or more characteristics of the VDSL (column 16, lines 13-20).

Regarding **claim 8**, Lewin et al. discloses the second predetermined PSD (upstream, 18 FIG.1 to 102 FIG.6 from CPE) complies with at least one public standard (VDSL).

7. Claims 2, 5-7 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewin et al. (US 6,829,252 B1) and Say (US 2002/0101914 A1).

Regarding **claim 2**, Lewin et al. discloses the data switch of VDSL which inherently provided at least two different PSDs (1D & 2D FIG.2 '0101914) disclosed by Say communicated with two CPE devices.

Regarding **claims 5 & 7**, Lewin et al. discloses the data switch of VDSL which inherently provided the first predetermined PSD (the downstream, DATA 122 FIG.6 to VDAL DATA16 FIG.1 to CPE) being substantially optimal for communication across a line experiencing substantially high levels of noise i.e. the high signal attenuation (2D FIG.2 '0101914) disclosed by Say.

Regarding **claim 6**, Lewin et al. discloses the data switch of VDSL which inherently provided the first predetermined PSD (the downstream, DATA 122 FIG.6 to VDAL DATA16 FIG.1 to CPE) being substantially optimal for communication across a line experiencing substantially low levels of noise (1D FIG.2 '0101914) disclosed by Say.

Regarding **claim 11**, in FIG.6, Lewin et al. discloses the data switch being operable to communicate to the one or more CPE devices using a PSD (output I/F 162) defined by a network administrator (160 RS-232, column 17, lines 13-19).

Regarding **claims 12 & 14**, in FIG.7, Lewin et al. discloses the *memory* (180 Database) being operable to store one or more parameters defining particular characteristics of one or more PSDs and the data switch being operable communicate with one or more CPE devices using the PSD, complying with public standard i.e. VDSL, the particular characteristics selected (FIG.6, 156, 150, 162, 140, 132, 114, column 14, lines 16-21).

Regarding **claim 13**, in FIG 1 & FIG.5, Lewin et al. discloses the data switch using frequencies in the very high speed digital subscriber line (VDSL, 16 FIG.5) band.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewin et al. (US 6,829,252 B1) in view of Palm (US 2002/0041572 A1).

Regarding **claims 9 & 10**, Lewin et al. does not explicitly specify the intersection (or the high probability PSD) of a plurality of PSDs complying with a particular of public standards (VDSL).

However, in FIG.2, Palm teaches the well-known intersection (or the high-probability PSD) of various xDSL (the low frequency region, 4 to 138 kHz, section [0047]). At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have the intersection well-known in the art taught by Palm in Lewin et al.'s data switch to have a VDSL handshaking technologies for the purpose of retaining back-ward capability with existing technologies (section [0049] '0041572) to communicate with the one or more CPE devices to establish a particular PSD (xDSL).

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Say (US 2002/0101914 A1) in view of Lewin et al. (US 6,829,252 B1).

Regarding **claim 22**, Say discloses a system for communication data (FIG.1), comprising:

A switch (110 DSLAM FIG.1, section [0017]) using frequencies in a very high-speed digital subscriber line (VDSL) band (FIG.2) coupled to one or more customer premises equipment (CPE) devices;

The switch operable to:

communicate with the one or more CPE devices using a first power spectral density (PSD) (200 ID FIG.2) complying at least one public standard (section [0022], VDSL);

communicate with the one or more CPE devices using a plurality of second PSDs (1U, 2D, 2U FIG.2), the second PSDs being substantially optimal for communications across lines (distance/attenuation, section [0024], lines 7-22);

communicate substantially simultaneously with two or more CPE devices using at least two different second PSDs (1U, 2U FIG.2);

However, Say does not explicitly specify the task of DSLAM located in the central office 100, Lewin et al. teaches the DSLAM automatically communicate with all of CPE deices (FIG.7 & FIG.8 214 '252) coupled to the switch using a predetermined PSD (message containing cold start, 214 FIG.8 '252) in the VDSL environment. As Say using the DSLAM communicating with CPEs, at the time of the invention was made, it would have been obvious to one of ordinary skill in the art having the DSLAM automatically communicate with all of CPE deices taught by Lewin et al. in Say's DSLAM to communicate (or establish the connection) to all CPE devices for the purpose of having the capability of transmitting and receiving data over VDSL on a plurality of channels (column 4, lines 27-32 '252).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lewin et al. (US 6,587,476 B1) describes a system with DSLAM communicating with CPEs via different channels.

Humphrey (US 6,449,261 B1) describes the PSD of ADSL and VDSL.

Paik et al. (US 6,862,261 B2) describes the ADSL and VDSL system.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M. Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay K. Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang
March 8, 2006


KHAI TRAN
PRIMARY EXAMINER